



Graver Technologies

Filtration | Separation | Purification

ZTEC™ WB Polyethersulfone Membrane Cartridge Filters

Pleated Polyethersulfone (PES) Membrane for Critical Filtration in Wine and Beer

ZTEC WB cartridge filters utilize a special polyethersulfone membrane to provide consistent removal of spoilage organisms and inorganic particulate. The product offers excellent retention efficiency and extended on-stream life making it an ideal filter for the clarification of beer and wine. The PES membrane, available with either 0.65 or 0.45 µm pore sizes, is designed to meet and surpass the filtration criteria necessary to maintain product quality and characteristics. Produced in an ISO Class 7 cleanroom, the cartridges are integrity tested during production to assure performance and consistency.

Filter Features–Benefits

- Manufactured in an ISO Class 7 Cleanroom Environment
- 100% flushed with 18 MΩ-cm DI water and integrity tested
- Low adsorption of protein, color and flavor components
- All materials are FDA listed for food and beverage contact
- Steamable/sanitizable for cleaning and reuse
- High log reduction values for spoilage organisms
- PES membrane provides high capacity contaminant loading

Typical Applications

- White Wine • Red Wine • Beer • Sparkling Wine
- Wine/Malt Coolers • Champagne • Distilled Spirits

Filter Specifications

Media:	Asymmetric Polyethersulfone membrane		
Inner core, end caps, cage:	Polypropylene		
Support layers:	Spunbonded Polypropylene		
Gaskets/O-Rings:	Buna-N, EPDM, Silicone, Viton, Teflon Encapsulated Viton O-Rings		
Micron ratings:	0.45 µm, 0.65 µm		
Dimensions and Operating Parameters			
Nominal lengths:	9.75"	10"	20", 30", 40" (24.7, 25.4, 50.8, 76.2, 101.6 cm)
Outside diameter:	2.7" (6.9 cm)		
Inside diameter:	1.0" (2.54 cm)		
Surface area:	7.6 ft ² . (0.7m ²) per 10 inch element		
Maximum sustained operating temperature:	180°F (82°C) at 20 psid (1.38 bar)		
Maximum differential pressure:	80 psid @ 70°F (5.5 bar @ 21°C)	40 psid @ 176°F (2.8 bar @ 80°C)	
Maximum reverse differential pressure:	40 psid @ 70°F (2.8 bar @ 21°C)		
Recommended change-out pressure:	35 psid (2.4 bar)		



Performance Specifications

Hot DI Water

Filter cartridge will withstand temperatures of 185°F (85°C) for up to 30 consecutive minutes.

Cleaning/Sanitization

Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1–14. Consult factory for specific compatibility information.

Steam/Autoclave

Cartridges may be steamed or autoclaved for at least 50 thirty minute cycles @ 275°F (135°C).

Typical Bacterial Retention Performance

- 0.45µm: LRV for *Lactobacillus brevis* ≥ 7.6
- 0.45µm: LRV for *Oenococcus oeni* ≥ 10.0
- 0.45µm: LRV for *S. cerevisiae* ≥ 11
- 0.65µm: LRV for *S. cerevisiae* ≥ 8.7

Integrity Test Specifications

Minimum Bubble Point values and maximum Diffusive Air Flow (per 10-inch cartridge) values for ZTEC WB filters wet with water:

Pore Size	Bubble Point	Diffusive Air Flow
0.45 µm:	≥ 20psig (1.4 bar)	≤ 35cc/min @ 16psig (1.1 bar)
0.65 µm:	≥ 17psig (1.2 bar)	≤ 35cc/min @ 14psig (1.0 bar)

FDA Listed Materials

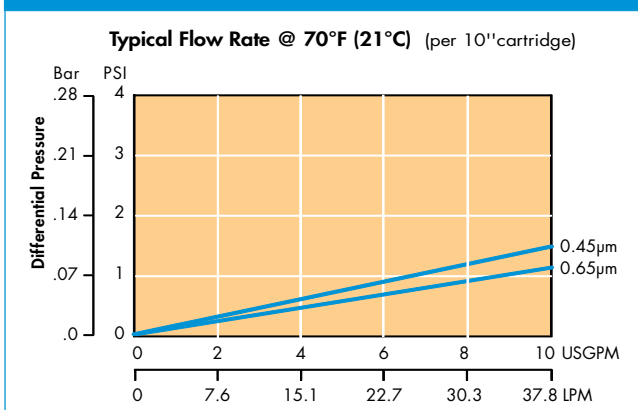
All materials comply with FDA title 21 of the Code of Federal Regulations Sections 174.5, as applicable for food and beverage contact.

ZTEC WB Nomenclature Information

<p>ZTEC WB</p> <p>Filter Type ZTEC WB Series Filters</p>	<p>0.45</p>	<p>-20</p> <p>Nominal Length (inches) -5 -9.75 -10 -20 -30 -40</p>	<p>P2</p>	<p>E</p> <p>Gasket or O-Ring S Silicone B Buna-N E EPDM V Viton T Teflon encap. Viton (O-Rings only)</p>
<p>Retention Rating (microns) 0.45 0.65</p>		<p>End Configuration P Double Open End P2 226/Flat Single Open End P3 222/Flat Single Open End P7 226/Fin Single Open End P8 222/Fin Single Open End AM Single open end, internal O-Ring</p>		

Example: ZTEC WB 0.45-20P2E = ZTEC WB filter, .45 micron, 20 inches, 226/Flat, EPDM O-ring

ZTEC WB FLOW RATE



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